

RESULTS OF BURNS UNDER JARRAH REGENERATION.

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In Forest Notes vol. 3 no.1, I voiced the opinion that damage to small jarrah trees from controlled burning could be regulated by the use of fire danger. The suggested measure of fire danger was the ratings shown in the controlled burning guide.

The opinion was supported by results from a burning trial in 6-year-old jarrah regeneration. These results showed some correlation between the amount of crown scorch and the fire danger rating used for the burn.

The trial covered three burns, at three different fire dangers. Each burn held 150 potential crop trees selected for measurement, and these trees had an average height of 10 feet.

Recently these trees were checked for recovery, and the results are quite interesting. Listed below are the fire dangers used for treatment, the number of trees fully scorched by treatment, and the number of trees killed by treatment.

Plot No.	Fire Danger	Number Fully Scorched	Number Killed
1	Purple 0.8	32	15
2	Green 1.2	100	52
3	Green 1.6	112	70

The results encourage my belief that damage can be effectively controlled by the use of the fire danger ratings. Critical differences for area controlled burning have yet to be determined, but it is quite obvious that the transition between Purple and Green is very important to the recovery of 10 feet high jarrah trees.

All trees have some degree of fire tolerance by virtue of a protective bark layer, which is a poor heat conductor. Kill results when fire intensity is such that the cambium is heated beyond about 60°C.

For controlled burning, the acceptable fire intensity for jarrah trees of approximately 10 feet in height will be somewhere below that defined by a fire danger of Purple 0.8.
